

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 28

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

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Ex parte ELIE FOUQUE, and JEAN-MANUEL MAS

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Appeal No. 2001-0971  
Application No. 08/256,736

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HEARD: July 25, 2002

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Before WINTERS, SCHEINER, and GREEN, Administrative Patent Judges.

GREEN, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-18. Claim 1 is representative of the subject matter on appeal, a copy of which can be found in the attached appendix.

The examiner relies upon the following references:

Denis et al. (Denis)	4,924,011	May 08, 1990
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Swindell et al. (Swindell) "Biologically Active Taxol Analogues with Deleted A-Ring Side Chain Substituents and Variable C-2' Configurations," J. Med. Chem Vol. 34, pp. 1176-1184 (1991)

Claims 1-18 stand rejected under 35 U.S.C. § 103(a) as being obvious over the combination of Denis and Swindell. After careful review of the record and consideration of the issue before us, we reverse.

#### DISCUSSION

Claims 1-18 stand rejected under 35 U.S.C. § 103(a) as being obvious over the combination of Denis and Swindell. The rejection is set forth below.

Denis [ ] teaches an esterification process which is substantially identical to the claimed process; note columns 2 and 3 of the patent. Denis [ ] teaches the temperature range of 60° to 90°C while the instant temperature range is -10° to less than 60°. Swindell [ ] teaches a similar esterification process wherein the reaction temperature is not a factor to be concerned [*sic*]; note the Scheme I in page 1177 of the reference. Thus, it would have been prima facie obvious to one of ordinary skill in the art at the time the claimed invention was made to carry out a process of Denis [ ] in a temperature range different from the prior art range; i.e., 60°C to 90°C, in the absence of the unobvious and/or unexpected results.

Examiner's Answer, page 4.

Appellants argue that the examiner has failed to set forth a prima facie case that the claimed esterification process, when performed at a temperature ranging from -10°C to less than 60°C, is obvious over the combination of Denis and Swindell. We agree.

According to Appellants, Denis teaches a range of 60°C to 90°C for the esterification. In addition, Appellants assert that, contrary to the examiner's characterization of Swindell, in fact, Swindell teaches that the esterification was performed at 70°C. Appellants argue that "none of the art of record even remotely suggests using a temperature less than 60°C," Appeal Brief, page 9, and that, "the esterification of the baccatine derivative was known to be a difficult

reaction even at the temperatures used in the prior art, so one of ordinary skill in the art would not have had any reason to expect success even if there were motivation to lower the temperature of the reaction,” id. at 10.

The burden is on the examiner to make a prima facie case of obviousness, and the examiner may meet this burden by demonstrating that the prior art would lead the ordinary artisan to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598-99 (Fed. Cir. 1988). The findings of fact underlying the obviousness rejection, as well as the conclusions of law, must be made in accordance with the Administrative Procedure Act, 5 U.S.C. 706 (A), (E) (1994). See Zurko v. Dickinson, 527 U.S. 150, 158, 119 S.Ct. 1816, 1821, 50 USPQ2d 1930, 1934 (1999). Findings of fact underlying the obviousness rejection upon review by the Court of Appeals for the Federal Circuit, our reviewing court, must be supported by substantial evidence within the record. See In re Gartside, 203 F.3d 1305, 1315, 53 USPQ2d 1769, 1775 (Fed. Cir. 2000). In addition, in order for meaningful appellate review to occur, the examiner must present a full and reasoned explanation of the rejection. See, e.g., In re Lee, 277 F.3d 1338, 1342, 61 USPQ2d 1430, 1432 (Fed. Cir. 2002).

The rejection before us on review does not meet the above criteria. The claims require that the esterification be performed at a temperature ranging from

-10°C to less than 60°C. The rejection does not provide facts or reasoning of why or how the prior art references relied upon teach or suggest that limitation. The examiner relies on Swindell for the proposition that the temperature is not critical, thus it would have been obvious to perform the reaction at any temperature. Denis however, teaches that esterification should take place at temperatures greater than 60°C, and Swindell in fact performs the esterification at 70°C. Thus, the rejection has not provided any teaching, suggestion, or motivation that would have led the ordinary artisan to perform the process at temperatures less than 60°C. See In re Lee, 277 F.3d 1338, 1342, 61 USPQ2d 1430, 1432 (Fed. Cir. 2002) (in reviewing an obviousness rejection, the court noted that “conclusory statements” as to teaching, suggestion or motivation to arrive at the claimed invention “do not adequately address the issue.”).

In the answer, the examiner also relies upon an additional reference, cited in the information disclosure statement, as not mentioning temperature as a key factor in the process, thus once again concluding that it would have been obvious to perform the reaction at any temperature. See Examiner’s Answer, page 5. The absence of a teaching, however, should not be interpreted as a teaching or suggestion that would motivate one of ordinary skill in the art to perform the esterification process at a lower temperature than what is taught in the prior art. Moreover, appellants state that “the esterification of the baccatine derivative was known to be a difficult reaction even at the temperatures used in the prior art, so one of ordinary skill in the art would not have had any reason to expect success even if there were motivation to lower the temperature of the

reaction.” Appeal Brief, page 10. The examiner has failed to refute that assertion, thus, in light of the state of the art as presented by appellants, there would have been even less motivation to lower the reaction temperature. Therefore, the rejection has not set forth a prima facie case of how the references would have led the ordinary artisan to the claimed invention.

CONCLUSION

The rejection of claims 1-18 under 35 U.S.C. § 103(a) over the combination of Denis and Swindell, for the reasons as set forth above, is

REVERSED

Sherman D. Winters	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
Toni R. Scheiner	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
	)	
Lora M. Green	)	
Administrative Patent Judge	)	

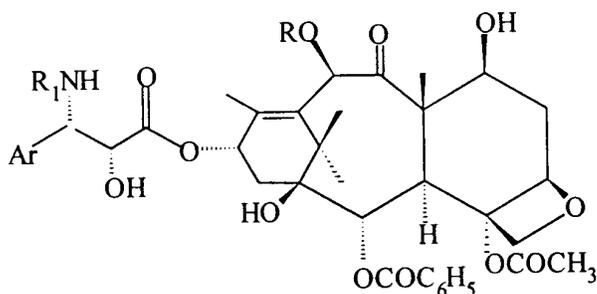
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Finnegan, Henderson, Farabow, Garrett &  
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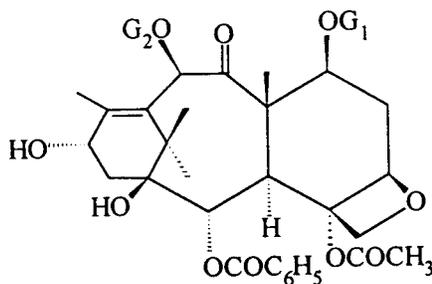
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Appendix

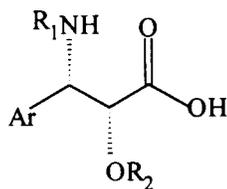
1. Method for preparing a taxane derivative of the formula:



in which Ar represents an aryl radical, R represents a hydrogen atom or the acetyl radical and R<sub>1</sub> represents a benzoyl or tert-butoxycarbonyl radical, comprising esterification of a derivative of baccatine III or of 10-deacetyl baccatine III of the formula:



in which G<sub>1</sub> represents a protecting group for the hydroxyl function and G<sub>2</sub> represents the acetyl radical or a protecting group for the hydroxyl function, using an acid of the formula:



in which Ar and R<sub>1</sub> are defined as above and R<sub>2</sub> represents a protecting group for the hydroxyl function, followed by replacement, by hydrogen atoms, of the protecting groups G<sub>1</sub>, G<sub>2</sub> and R<sub>2</sub> of the product obtained, and wherein the esterification is carried out at a temperature ranging from -10 to less than 60 °C.